

SAFETY AND HEALTH

(This Article is applicable only if the Contract (i) involves work on or with JPL pressure vessel(s) or pressure system(s) or the Contractor intends to install or operate pressure vessel(s) or pressure system(s) on a JPL or JPL-controlled facility, regardless of dollar value; (ii) requires work involving the use of hazardous materials or operations, regardless of dollar value; (iii) exceeds \$25,000 and involves construction, repair, or alteration of facilities; or (iv) exceeds \$1,000,000, unless a waiver is granted.)

- (a) The Contractor shall take all reasonable safety and health measures in performing under this Contract and shall, to the extent set forth below, submit a safety plan and a health plan (applicable to the work to be performed under this Contract) for JPL's approval. The Contractor shall comply with all Federal, State, and local laws applicable to safety and health in effect on the date of this Contract and with the safety and health standards, specifications, reporting requirements, and provisions set forth below.
- (b) The Contractor shall take or cause to be taken any other safety and health measures JPL may reasonably direct. To the extent that the Contractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this contract, the equitable adjustment shall be determined pursuant to the procedures of the Article of this Contract entitled "Changes," provided, that no adjustment shall be made under this Safety and Health Article for any change for which an equitable adjustment is expressly provided under any other provision of the Contract.
- (c) Standards. The following safety and health standards, specifications, issuances, and reporting requirements are prescribed pursuant to paragraph (a).
 - (1) General Standards and Specifications: The Contractor shall comply with applicable provisions of the Occupational Safety and Health Standards of the Occupational Safety and Health Act of 1970, Rules and Regulations of the Department of Labor issued pursuant thereto and regulations of states provided for under the Act. Within California the Contractor shall comply with applicable provisions of the California Occupational Safety and Health Act of 1973. NASA Procedures and Guidelines (NPGs) 8715, Draft 2, Safety Manual, shall be used as a general policy guide to establish a safety program to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
 - (2) As part of the Contractor's safety and health plan, the Contractor shall furnish a list of all hazardous operations to be performed, including operations covered by measures indicated in paragraphs (a) and (b) of this Article and a list of other major or key operations required or planned in the performance of the Contract, even though not deemed hazardous by the Contractor. JPL and the Contractor shall jointly decide which operations are to be considered hazardous with JPL as the final authority. Before hazardous operations commence, the Contractor shall develop, review, and provide plans for the operation for JPL to review. The Contractor's review procedure shall include evaluations by operating personnel, management and safety professionals, as appropriate. Lists of personnel trained and certified or specified for each hazardous operation shall be maintained. Such records shall be supplied to JPL on request.
 - (3) Flight Project Safety: The Contractor shall include in each Project Plan prepared for a flight project the safety needs and special safety monitoring required for the flight project. Project Plans containing such requirements will be referenced in the flight project task order issued by the Contracting Officer under the Prime Contract and the Contractor shall comply with those requirements.
 - (4) Nuclear Safety: Radioactive material will be handled in accordance with appropriate State of California, Department of Energy and/or Nuclear Regulatory Commission requirements and in accordance with National Aeronautics and Space Council document, "Nuclear Safety Review and Approval Procedures for Minor Radioactive Sources in Space Operations". Additionally, when radioactive material is to be used in space launches, they shall meet the requirements of the Interagency Nuclear Safety Review Panel (INSRP) as directed by the President of the United States.
 - (5) Propulsion Safety: Chemical Propulsion Information Agency Publication No. 194, Chemical Rocket/ Propellant Hazards, Volumes II and III and DOD Manual 4145.26M, Contractor's Safety Manual for Ammunition and Explosives, March 1986 shall be used as guides in establishing propulsion safety requirements to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
 - (6) Fire Protection and Life Safety: The Contractor shall comply with all applicable Federal, State, and Local requirements pertaining to fire protection and life safety. NASA Std NSS 1740.11, NASA Safety Standard for Fire Protection and Life Safety will be followed to ensure safety of NASA facilities.

- (7) Ammunition and Explosive Safety: The Contractor shall comply with all applicable Federal, State, and Local requirements pertaining to ammunition and explosive safety and the requirements shall be used to establish a propulsion safety program to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
- (8) Pressure Vessel and Pressure System Safety: All Contractors performing work under this Contract on or with JPL pressure vessels or pressure systems or pressure vessels or pressure systems to be installed or operated on a JPL or JPL controlled facility shall comply with the requirements of JPL Safety Practice 4-08-70, Pressure Vessels and Systems, currently in effect (copy available upon request) or JPL Safety Office approved equivalent submitted by the Contractor.
- (9) Any additional safety and health standards, specifications, issuances and reporting requirements set forth in this Contract.
- (d) The safety and health plan to be submitted by the Contractor pursuant to paragraph (a) above shall implement the requirements of this Article and of the standards and specifications of paragraph (c) of this Article and shall describe the means to be employed by the Contractor to monitor and enforce said requirements. The plan shall include the Contractor's standards and criteria for imposing safety and health standards upon its subcontractors of any tier and its plans and procedures for monitoring compliance with such standards. A safety and health plan for similar work performed by the Contractor on a Federal contract may be submitted for review and approval under this Article.
- (e) The Contractor shall immediately notify and promptly report to JPL any accident, incident, or exposure resulting in fatality, lost-time occupational injury, occupational disease, contamination of property (or, if this Contract sets forth any acceptable threshold limits of contamination, any contamination of property beyond those stated limits) or property loss of \$25,000 or more arising out of work performed under this Contract. The Contractor is not required to include in any report an expression of opinion as to the fault or negligence of any employee. Service contractors (excluding construction contracts) shall provide quarterly reports specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the contract Schedule. The Contractor shall investigate all work-related incidents or accidents to the extent necessary to determine their causes and furnish the JPL a report, in such form as JPL may require, of the investigative findings and proposed or completed corrective actions. In addition, the Contractor shall comply with the illness, incident and injury experience reporting requirements set forth below or elsewhere in this Contract.
- (f) Illness, Incident and Injury Experience Reports.
 - (1) Reports required by this Article or elsewhere in this Contract shall be furnished in three copies unless otherwise specified.
 - (2) The following illness, incident, and injury experience reports are prescribed pursuant to paragraph (e) above:
 - (A) Investigative Reports: The Contractor shall furnish reports of investigation of individual incidents or accidents or close calls in formats approved by JPL; provided, however, that the Contractor shall not be required to furnish personally identifiable information concerning Contractor or subcontractor employees. Lessons learned from these reports, excluding those related to close calls unless the Contractor believes that material value may be derived from such reporting shall be reported to JPL (for use by JPL as inputs into the NASA Lessons Learned Program).
 - (B) Mishap Reports: The Contractor shall furnish JPL mishap reports and respond to JPL requests for mishap reviews. The Contractor shall conduct its own mishap investigations consistent with NPD 8621.1G, NASA Mishap Reporting and Investigating Policy, dated December 1997, with the understanding that all references to NASA in that policy shall be interpreted to mean the Contractor. The Contractor shall utilize the NPD 8621.1G procedures as guidelines. The Contractor shall also report to the JPL negotiator any incidents that may have visibility in the press, mission failures, or mission anomalies which will have high JPL or NASA visibility in the press.
 - (C) Experience Reports: If this Contract requires more than just a small amount of work on a Government installation or premises under the control of the Institute, the Contractor shall prepare and submit to JPL quarterly and semi-annual reports of occupational related illness, incidents, injury experience, and Government property damage due to mishaps or natural phenomena in such detail as prescribed in formats approved by the JPL Negotiator.

- (D) The Contractor shall furnish such other reports as JPL determines to be related to the Contractor's safety and health program and its experiences thereunder.
- (g) (1) JPL may notify the Contractor in writing of any noncompliance with this Article and specify corrective actions to be taken. The Contractor shall promptly take and report any necessary corrective action.
- (2) If the Contractor fails or refuses to institute prompt corrective action in accordance with subparagraph (g)(1) of this Article, JPL may invoke any stop work or suspension of work provision of this Contract or any other remedy legally available to the Institute in the event of such failure by the Contractor.
- (h) The Contractor (or subcontractor or supplier) shall cause the substance of this Article, including this paragraph (h) and any applicable provisions of this Contract, with any appropriate changes of designations of the parties, to be inserted in subcontracts of every tier which:
- (1) Amount to \$1,000,000 or more, unless JPL makes a written determination that this is not required;
- (2) Require construction, repair, or alteration in excess of \$25,000;
- (3) Regardless of dollar amount, involve the use of hazardous materials or operations; or
- (4) Regardless of dollar amount, involve work on or with JPL pressure vessel(s) or pressure system(s) or the installation or operation of pressure vessel(s) or pressure system(s) on a JPL or JPL-controlled facility.
- (i) The Contractor agrees that authorized representatives of JPL or the Contracting Officer shall have access to and the right to examine the sites or areas where work under this Contract is being performed in order to determine the adequacy of the Contractor's safety and health measures under this Article.